
Physaria okanensis (Brassicaceae), a New Species from Catamarca, Argentina

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ABSTRACT. *Physaria okanensis* Al-Shehbaz & Prina (Brassicaceae), a new species from Catamarca, Argentina, is described and illustrated. It is distinguished from the five other South American species of *Physaria* (Nuttall) A. Gray by its densely pulvinate habit and few-flowered scapes. It resembles the non-pulvinate, often non-scapose *P. pygmaea* O’Kane & Al-Shehbaz, but also differs by having longer petals and larger, orbicular (vs. ovoid) fruits. The IUCN status of the new species is determined as Data Deficient (DD).

Key words: Argentina, Brassicaceae, Catamarca, IUCN Red List, *Physaria*.

Physaria (Nuttall) A. Gray (ca. 90 species) is a primarily North American genus, and only five species are disjunctly distributed in Argentina and neighboring Bolivia (O’Kane & Al-Shehbaz, 2004). Taxonomic limits of the genus have recently been expanded to include *Lesquerella* S. Watson, and for a detailed discussion and references, the interested reader should consult Al-Shehbaz and O’Kane (2002). A single species, *L. mendocina* (Philippi) Kurtz, was previously thought to grow in South America (Boelcke, 1967; Boelcke & Romanczuk, 1984). However, with a better understanding of the character variation in the genus and substantial fieldwork, the number of species is likely to be more than six, including the novelty below.

The new species was discovered by the authors during their separate visits to the herbarium of Fundación Miguel Lillo (LIL) in San Miguel de Tucumán, Argentina.

Physaria okanensis Al-Shehbaz & Prina, sp. nov.

TYPE: Argentina. Catamarca: al norte del Cerro El Manchao, 4000 m, 27 Oct. 1979, *Stephan Haloy* A. 809 (holotype, LIL 574675; isotype, MO [LIL fragm.]). Figure 1.

Herba perennis pulvinata scaposa 10–30 cm diam., dense argenteo-pubescent, caudice crasso lignoso multiramoso.

Folia basalia rosulata, petiolata, integra, oblanceolata; folia caulina nulla. Racemi 2- vel 3-flori; pedicelli fructiferi recti, 7–10 mm longi. Petala lutea, spathulata, 7–8 mm longa; ovula 10 ad 12. Fructus orbiculares, angustiseptati, 8–10 × 8–10 mm, stylo tenui 3.5–4 mm longo coronato; semina compressa, ovata, exalata, ca. 2.5 × 1.5 mm.

Pulvinate, scapose perennials with cushions 10–30 cm diam., densely silvery pubescent throughout; trichomes sessile, stellate, 0.08–0.13 mm diam., not webbed, with 16 to 22 ultimate branches; caudex thick, woody, with numerous branches covered with leaf remains of previous years; stems erect, simple, 0.7–1.2 cm. Basal leaves rosulate; petiole 4–6 mm, expanded to a base 1.5–2 mm wide; leaf blade oblanceolate, 5–8 × 1.5–2 mm, base attenuate, margin entire, apex obtuse; cauline leaves absent. Racemes 2- or 3-flowered, ebracteate, scarcely elongated in fruit. Sepals oblong, ascending, 4.5–5 × 1–1.2 mm, not saccate at base, silvery pubescent, caducous; petals yellow, spatulate, 7–8 × 1.5–2 mm; filaments 3.5–4 mm; anthers narrowly oblong, 1–1.2 mm; ovules 10 to 12 per ovary. Fruiting pedicels slender, straight, ascending-divaricate, 7–10 mm; fruit orbicular, angustiseptate, 8–10 × 8–10 mm, moderately pubescent, sessile, obtuse at base, slightly emarginate at apex; replum 2.5–3 mm wide; septum perforate; style slender, 3.5–4 mm; stigma wider than style; seeds compressed, ovate, wingless, ca. 2.5 × 1.5 mm; cotyledons accumbent.

Distribution and IUCN Red List category. The new species is known only from the type specimen and appears to be extremely rare, as evidenced from the numerous Argentinean collections of other *Physaria* species examined by the authors. Therefore, its IUCN Red List category (IUCN, 2001) remains uncertain, with its current assessment as Data Deficient (DD).

Etymology. *Physaria okanensis* is named in honor of Steve L. O’Kane Jr., a world authority on the genus *Physaria*.

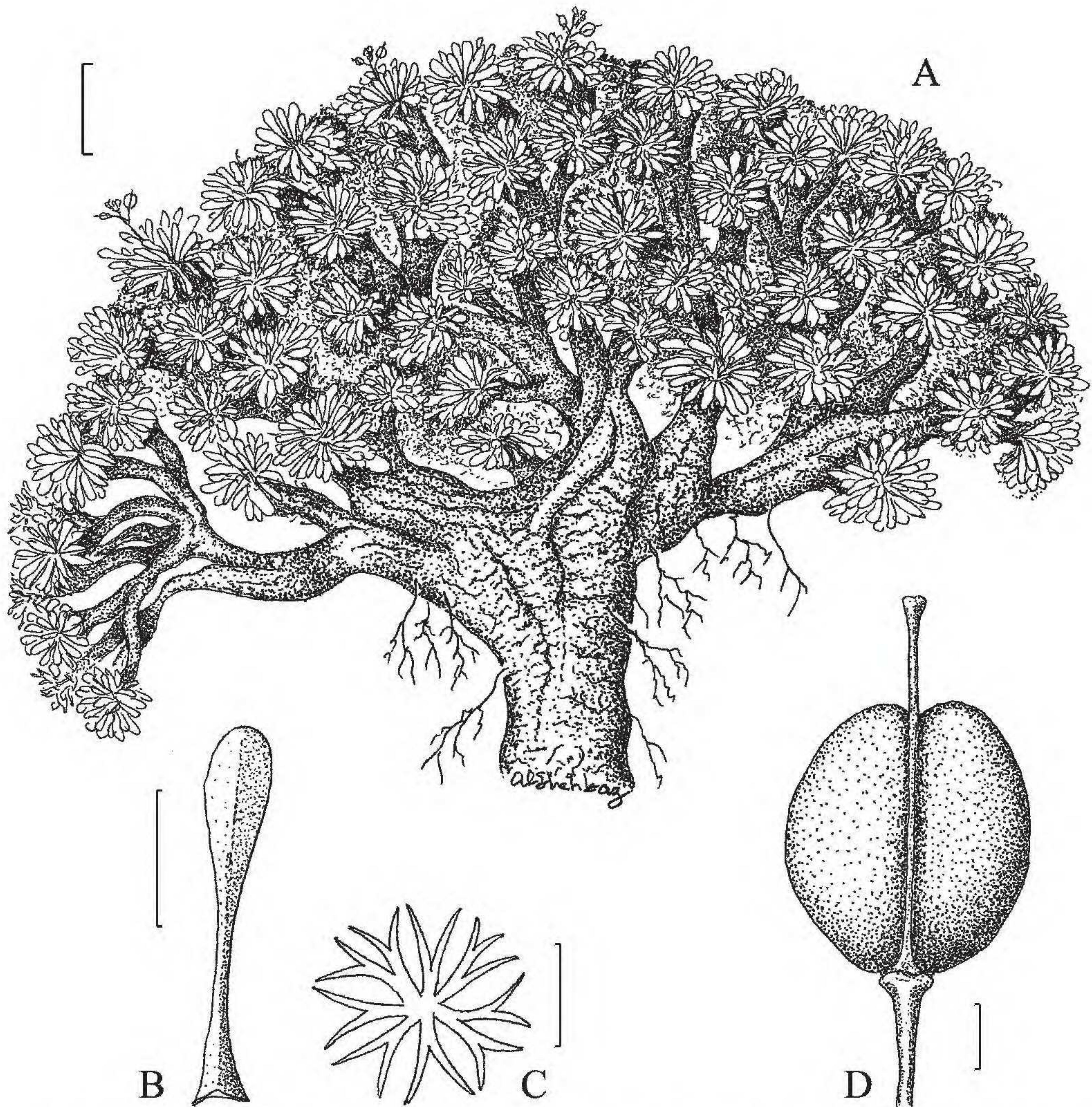


Figure 1. *Physaria okanensis* Al-Shehbaz & Prina. —A. Plant. —B. Leaf. —C. Leaf trichome. —D. Fruit (trichomes not drawn). Scale bars: A = 1 cm; B = 5 mm; C = 0.08 mm; D = 1 mm. Drawn by Al-Shehbaz from the holotype, *Haloy 809* (LIL).

Discussion. The new species is readily distinguished from five other South American species of *Physaria* by forming large cushions 10–30 cm diam. and by producing few-flowered, ebracteate scapes. The other species are non-pulvinate and produce leafy flowering stems, although *P. pygmaea* O’Kane & Al-Shehbaz is occasionally scapose. *Physaria okanensis* and *P. pygmaea* are similar in having few-flowered racemes, but differ by having petiolate (vs. sessile) leaves, longer petals (7–8 mm vs. 4–5[–6] mm), and larger fruits that are 8–10 × 8–10 mm (vs. 4–5[–8] × 3–4[–5] mm) and orbicular (vs. ovoid).

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